Title (en)

Method of manufacturing transition metal oxide rod

Title (de)

Verfahren zur Herstellung von Stäbchen aus Übergangsmetalloxiden

Title (fr)

Procédé de fabrication d'un bâtonnet d'oxydes métalliques de transition

Publication

**EP 2218787 A1 20100818 (EN)**

Application

**EP 09166859 A 20090730**

Priority

KR 20090011628 A 20090212

Abstract (en)

The present invention relates to an organic-inorganic composite comprising bacteria and transition metal oxides and a method of manufacturing the same. More specifically, the present invention relates to an organic-inorganic composite comprising bacteria and transition metal oxides manufactured by attaching cationic transition metal precursor to bacterial surface, wherein the bacteria with high negative charge on its surface is used as a template, refluxing the bacteria and transition metal ions at room temperature in the presence of sodium borohydride (NaBH 4 ), and inducing reduction/spontaneous oxidation, thereby having an excellent high capacity electrochemical properties, and a method of manufacturing the same. Therefore, the method of manufacturing the organic-inorganic composite according to the present invention has advantages that it enables to reduce manufacturing cost and the time required therein, mass production, low temperature synthesis, synthesis of uniform nano-structures, control of one dimensional type, be applied to other metal oxides, thus being expected to be used as parts in other electrochemical fields including lithium secondary batteries, super capacitor, nanoelectro-optical system, catalyst and the like.

IPC 8 full level

**B01J 35/00** (2006.01); **B01J 35/02** (2006.01); **B82Y 30/00** (2011.01); **B82Y 99/00** (2011.01); **C01G 1/02** (2006.01); **C01G 49/00** (2006.01); **C01G 49/02** (2006.01); **C01G 49/08** (2006.01); **C01G 51/00** (2006.01); **C01G 51/04** (2006.01); **C07C 15/52** (2006.01); **C07C 69/618** (2006.01); **C12P 3/00** (2006.01); **H01G 11/06** (2013.01); **H01G 11/22** (2013.01); **H01G 11/30** (2013.01); **H01G 11/46** (2013.01); **H01M 4/36** (2006.01); **H01M 4/48** (2006.01); B01J 37/36 (2006.01); C01G 51/02 (2006.01); H01M 4/02 (2006.01); H01M 4/485 (2010.01); H01M 4/62 (2006.01)

CPC (source: EP KR US)

**C01G 49/08** (2013.01 - EP US); **C01G 51/02** (2013.01 - EP US); **C12P 3/00** (2013.01 - EP US); **H01M 4/02** (2013.01 - KR); **H01M 4/04** (2013.01 - KR); **H01M 4/485** (2013.01 - EP US); **H01M 4/60** (2013.01 - KR); **H01M 4/621** (2013.01 - EP US); B82Y 30/00 (2013.01 - KR); C01P 2002/72 (2013.01 - EP US); C01P 2002/85 (2013.01 - EP US); C01P 2002/88 (2013.01 - EP US); C01P 2004/03 (2013.01 - EP US); C01P 2006/40 (2013.01 - EP US); H01M 10/0525 (2013.01 - EP US); Y02E 60/10 (2013.01 - EP); Y10T 428/13 (2015.01 - EP US)

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Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

Designated extension state (EPC)

AL BA RS

DOCDB simple family (publication)

**EP 2218787 A1 20100818**; **EP 2218787 B1 20120912**; JP 2010184853 A 20100826; JP 5270503 B2 20130821; KR 101109124 B1 20120216; KR 20100092324 A 20100820; US 2010203360 A1 20100812; US 8685550 B2 20140401

DOCDB simple family (application)

**EP 09166859 A 20090730**; JP 2009222883 A 20090928; KR 20090011628 A 20090212; US 46237609 A 20090803